GALE FORCE
SUSPENSION MANAGEMENT
WINSTON-SALEM, NC
251-583-9748

# USER MANUAL


## WWW.GALEFORCESUSPENSION.COM

SHOCKIN YALL!

2550 Viceroy Drive | Winston-Salem, NC 27103

# WWW.GALEFORCESUSPENSION.COM

Welcome and thank you for your purchase of the Coilover Load Pro. We look forward to serving you with all of your racing suspension tool needs. If you ever have any questions feel free to contact us at info@galeforcesuspension.com We will try to help you in any way.

## Machine Set – Up

Your machine is calibrated from the factory. If you feel at any time that it needs to be re calibrated you can use a shock strut that is at a fixed length. Install the strut in the machine and load to 500lbs and look at your slide rule. If it doesn't display your strut length then loosen the set screw in the slide rule and adjust it to the strut length.

Your machine comes equipped with a 12 ton air/over hydraulic jacking mechanism. You may also use your machine manually with the equipped jack handle.

You will need a 3/8 ratchet and 9/16 socket to use the free spinning head and load or unload the coilover. Also needed is a special wrench for your coilover nut. You may also use an extended spanner wrench that will fit your coilover nut.

You may also want to have your set-up notebook handy for jotting down load numbers. Gale force suspension also makes a set-up work book that works along with the machine and makes the note taking much easier. And combines all information needed. You may purchase online at www.galeforcesuspension.com

## Machine Care & Handling

As with any new equipment you should always keep it clean and free of debris so that it will always perform the way it is intended.

We recommend a drop of lubricant in the bearings inside the free spinning head.

You should always be careful when working with any loaded pressure, example load jacks, shocks,spings, or air pressure. These items can be harmful to your health. Always keep your hands clear and wear safety glasses when operating the machine.

We are not responsible for any injuries caused in conjunction with operating the coilover load pro. You should always use caution using any type of machinery or tools.

Always quick clip your pins that hold your coilovers in the clevis.

# WWW.GALEFORCESUSPENSION.COM

## LOAD OPERATION

1. You should always start by getting your car completely set-up on the scales driver and fuel.
2. Get your ride height set where you need or like it to be based on your car.
3. Once you have this established you need to then measure the eye to eye height on the coilover.
4. Once you have these measurements its time to go to the machine.
5. You will now load each coilover in the machine to establish your load numbers.
6. After you pin the coilover in the machine run the shock up to your eye to eye number.(Lets say 17 ½ for examples sake.)
7. Once you have ran the shock up to 17 ½ the machine will give you what is called a load number. (lets say that number is 680.)

8. You should now write down all your load numbers from this set-up. We have a convenient set-up notebook designed to work with the machine. You can pick it up online at www.galeforcesuspension.com

9. Now that you have these load numbers you can do any shock or spring combination on the fly.

10. Put your new coilover combo on the machine run it up to 17 ½ and load it to 680lbs.

11. Your done put the coilover back on the car and your ride height, cross, left side are all still

12. perfect. See the dramatic time difference this makes at the track on set-up.

13. No more scales, level spots, jacking up and down, stripping shock threads, and most of all 50% time savings.

14. You can prepare a high and low cross set-up back in the shop get the load numbers and be ready to make coilover changes at the track in a flash.

15. Never be scared to make a change at the track again. No more losing or chasing your car.

16. We will now move along to checking true spring rate.

# WWW.GALEFORCESUSPENSION.COM

## TRUE SPRING RATE TESTING

1. You can check true spring rate with the Coilover Load Pro. This is the only machine on the market you can check true spring rate.

2. You can check spring rate rite on the shock with head pressure. One of a kind operation.

3. You simply lock the coilover into the clevis' on the machine. Make sure to install quick pins.

4. Zero the load meter and run up in ½ or 1" increments take down your load number.

5. For the next ½ or 1' hit TARE then run up the next measurement this will zero and give you the next load number. ( you can hit Tare again and the machine will show you your overall load.) Continue this method all the way to coil bind if you like.

6. As you can see this is true spring rating at its best full travel unlike any other machine.

## COIL BIND LOAD TESTING

1. You can also check coil bind loads to see if your spring is wrapping or laying over on you.

2. The machine has enough reach in the jacking mechanism in most cases, that you can check coil binding depending on your static height.

3. Lock the coilover in the machine clevis' making sure to quick pin it for safety.

4. Run the jack up until the spring coil binds you can now see spring wrap and load exerted to the wheel. Depending on your static height.

5. Another revolutionary benefit to this tool.


# WWW.GALEFORCESUSPENSION.COM

## BUMP RUBBER TESTING

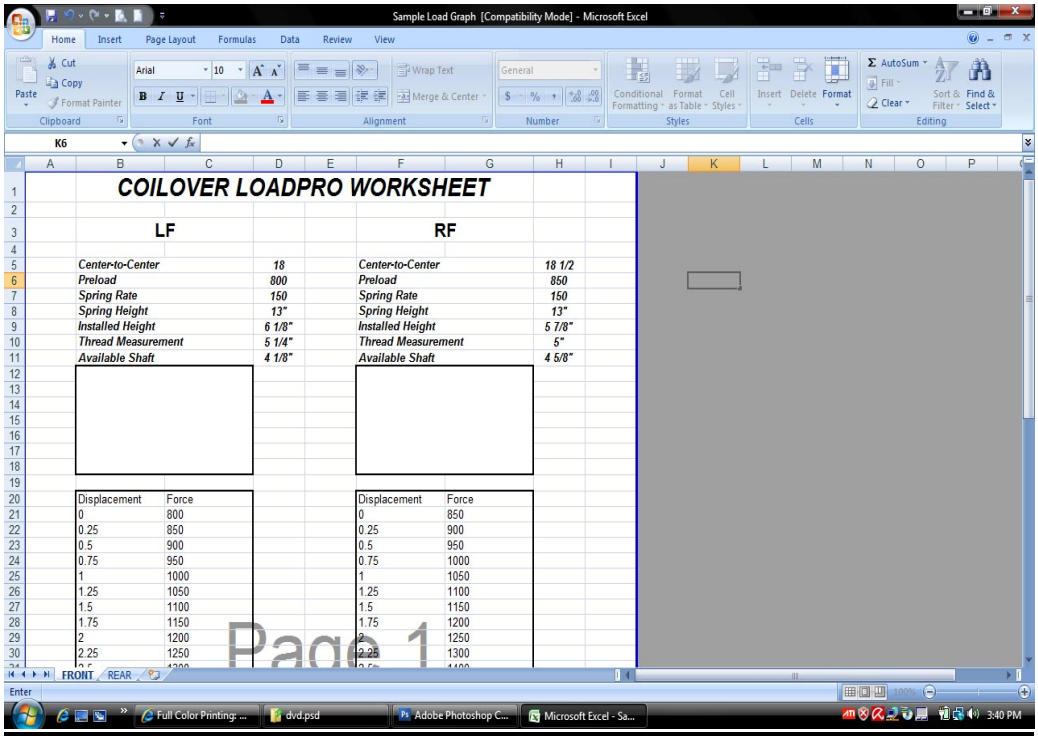
1. You can test bump rubber loads with ease in the Coilover load pro.
2. Lock the coilover in the machine clevis' making sure to install the quick pins.
3. Run the machine up until the bump rubber is just barely loose.
4. Then you can measure by ¼ increments push TARE in between each increment.(pushing tare again will take you back to your over-all load.)
5. Make sure you write this info down for your set-up records.

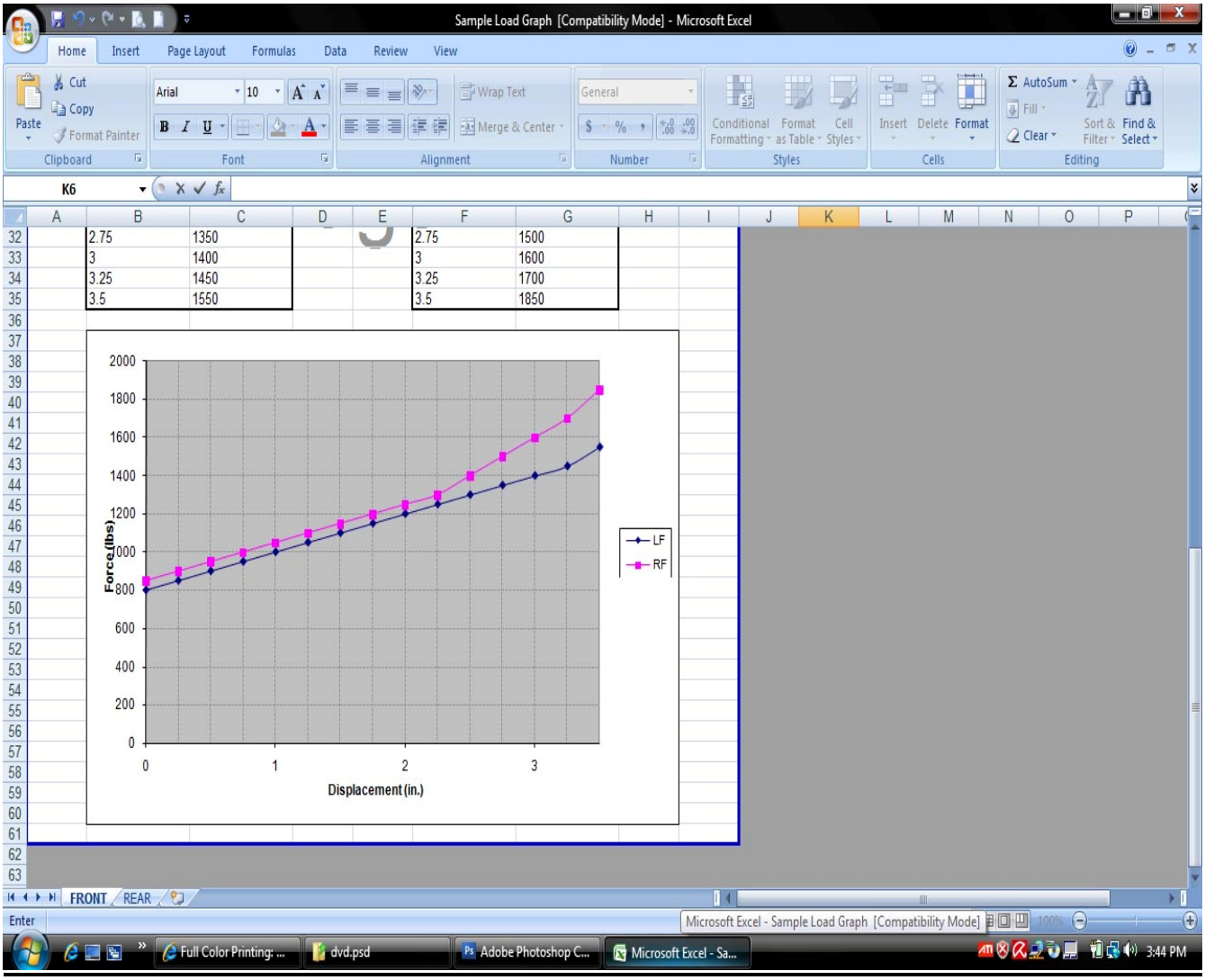
## SPRING REMOVAL

1. The tool is also equipped with a revolutionary new spring removal tool.
2. The spring removal tool allows you to remove and replace a spring in under 3 minutes without ever touching the coilover nut.
3. You simply place the coilover in the removal jack clevis making sure to quick pin it for safety.
4. Tilt the spring up in the spring forks and adjust up or down accordingly.
5. Now you can jack the coilover up until the retainer is loose.

6. Let the jack down remove the spring and slide the new one on.
7. You now place the new spring in the forks and jack up slowly.
8. Jack until have enough clearance to replace the retainer and your, done.

## GRAPHING SOFTWARE




Sample Load Graph [Compatibility Mode] - Microsoft Excel
Force (lbs)
Displacement (in.)
LF
RF
FRONT
REAR

The graphing software works along with the Coilover Load Pro to help you establish more accuracy in your setups. The graph will show you how linear your set-up is and where you need to improve.

1. Establish Your eye to eye measurements

2. Your pre load

3. Your spring rate

4. Your spring height

5. Your installed height

6. Thread measurement

7. Available shaft

8. Then you will use the Coilover Load Pro to establish load numbers every ¼ inch. As you establish these numbers type them into the appropriate height box for the left front then the left front.

9. The worksheet will then show you a layover graph that will help you establish how linear your shock / bump combination is.

10. This information is vital and is definitely an eye opener.


# GALE FORCE SUSPENSION MANAGEMENT INC.

**2400 Clemmonsville Road**
**Suite 300**
**Winston-Salem, North Carolina 27127**

# 251-583-9748

**info@galeforcesuspension.com**